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First record of the rain frog *Pristimantis myersi* (Goin & Cochran, 1963) (Anura, Craugastoridae) for Ecuador

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Abstract: *Pristimantis myersi* is a small Andean frog that inhabits paramos, sub-paramos and upper Andean forests at elevations between 2,900–3,275 m. It is known from about a dozen localities in the southern end of the Cordillera Central of the Colombian Andes. Herein, we report for the first time the presence of this species in Ecuador, based on ten specimens from three localities in the provinces of Imbabura and Sucumbíos. The species' range is extended and a distribution map with the Ecuadorian records is provided.

Key words: Amphibia, Terrarana, Cutín, direct-developing frog, Andes

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The direct-developing frog genus *Pristimantis* is by far the most specious among terrestrial vertebrates (Hedges *et al.* 2008). It contains 473 species (Frost 2014) currently divided into 16 phenetic species groups (Hedges *et al.* 2008 *sensu* Lynch and Duellman 1997). One of them, the *Pristimantis myersi* group, is composed by small terrestrial frogs that inhabit paramos, cloud forests, and upper humid montane forests of the Andes of Colombia and Ecuador (Hedges *et al.* 2008). To date, 16 species have been assigned to this group (Hedges *et al.* 2008; Guayasamin and Funk 2009; Rödder and Schmitz 2009; Yánez-Muñoz *et al.* 2010; Rojas-Runjaic *et al.* 2014), and 12 of them have been recorded in Ecuador: *P. bicantus* Guayasamin & Funk, 2009, *P. festae* (Peracca, 1904), *P. floridus* (Lynch & Duellman, 1997), *P. gladiator* (Lynch, 1976), *P. hectus* (Lynch & Burrowes, 1990), *P. leoni* (Lynch, 1976), *P. lucidosignatus* Rödder & Schmitz, 2009, *P. munozi* Rojas-Runjaic, Delgado & Guayasamin, 2014, *P. ocreatus* (Lynch, 1981), *P. onorei* Rödder & Schmitz, 2009, *P. pyrrhomerus* (Lynch, 1976) and *P. sirnigeli* Yánez-Muñoz, Meza-Ramos, Cisneros-Heredia & Reyes, 2010.

Pristimantis myersi (Goin & Cochran, 1963), the type species of the homonymous phenetic group, is characterized by its small size (males SVL: 13.7–17.5 mm; females SVL: 17.5–23.2 mm); tuberculate dorsal skin, paravertebral (sometimes absent) and sinuate dorsolateral folds, ventral surface areolate to coarsely areolate; visible tympanum; subacuminate snout in dorsal view; sharp *canthus rostralis*; upper eyelid bearing numerous low tubercles; vomerine odontophores absent, with two to three teeth; males with vocal slits; fingers and toes bearing narrow keels, small discs and minute pads; brown dorsal coloration, black venter, and red spots (in life) in groins, anterior and posterior surfaces of thighs (Lynch 1981). This species inhabits paramos, sub-paramos and upper Andean forests (from 2,900–3,275 m), and is known from about a dozen localities at the southern end of the Cordillera Central in Colombia, in the departments of Valle del Cauca and Nariño (Castro *et al.* 2004; Appendix 1). Its presence in the neighboring Ecuador has been expected, but no records have been published to date (Castro *et al.* 2004).

During a revision of museum specimens of the *Pristimantis myersi* group from Ecuador, 10 individuals of *Pristimantis myersi* were found. These specimens (deposited in the herpetological collection of the Museo de Zoología de la Pontificia Universidad Católica del Ecuador, Quito, QCAZ) were misidentified as *P. festae* and *P. ocreatus*. All the specimens come from three localities at the northern Ecuador: 1) near Laguna de Puruhanta (or Puruanta), Province of Imbabura (00°12′ N, 077°57′ W; 2,800 m above sea level [a.s.l.]; QCAZ 11677); 2) Nueva América, Province of Imbabura (00°15′ N, 077°59′ W; 3,400–3,470 m a.s.l.; QCAZ 14554–14560); and 3) El Playón de San Francisco, Province of Sucumbíos (00°38′ N, 077°37′ W; 3,350–3,650 m a.s.l.; QCAZ 14561–14562) (Figure 1). These specimens (Figure 2) represent the first record of *Pristimantis myersi* for Ecuador, and extend its distribution *ca.* 135 km south-southwest from the southernmost locality previously referred in Colombia (paramo of El Tábano, Department of Nariño; Castro *et al.* 2004). The altitudinal distribution is also extended from 2,800 to 3,650 m (all localities previously known range from 2,900 to 3,275 m).

Frogs of the genus *Pristimantis* are characterized by the presence of relatively few external morphological diagnostic characters and a striking intraspecific variation that frequently overlaps the interspecific variation (Guayasamin and Funk 2009). Species identification based in classic taxonomy (external morphology) occasionally can be very difficult and not free of mistakes. Consequently, is not surprising finding unreported, or inclusive new species, resting in biological collections, hidden under incorrect names.

Careful revisions of specimens deposited in biological collections, can substantially improve the current knowledge of the amphibian biodiversity.

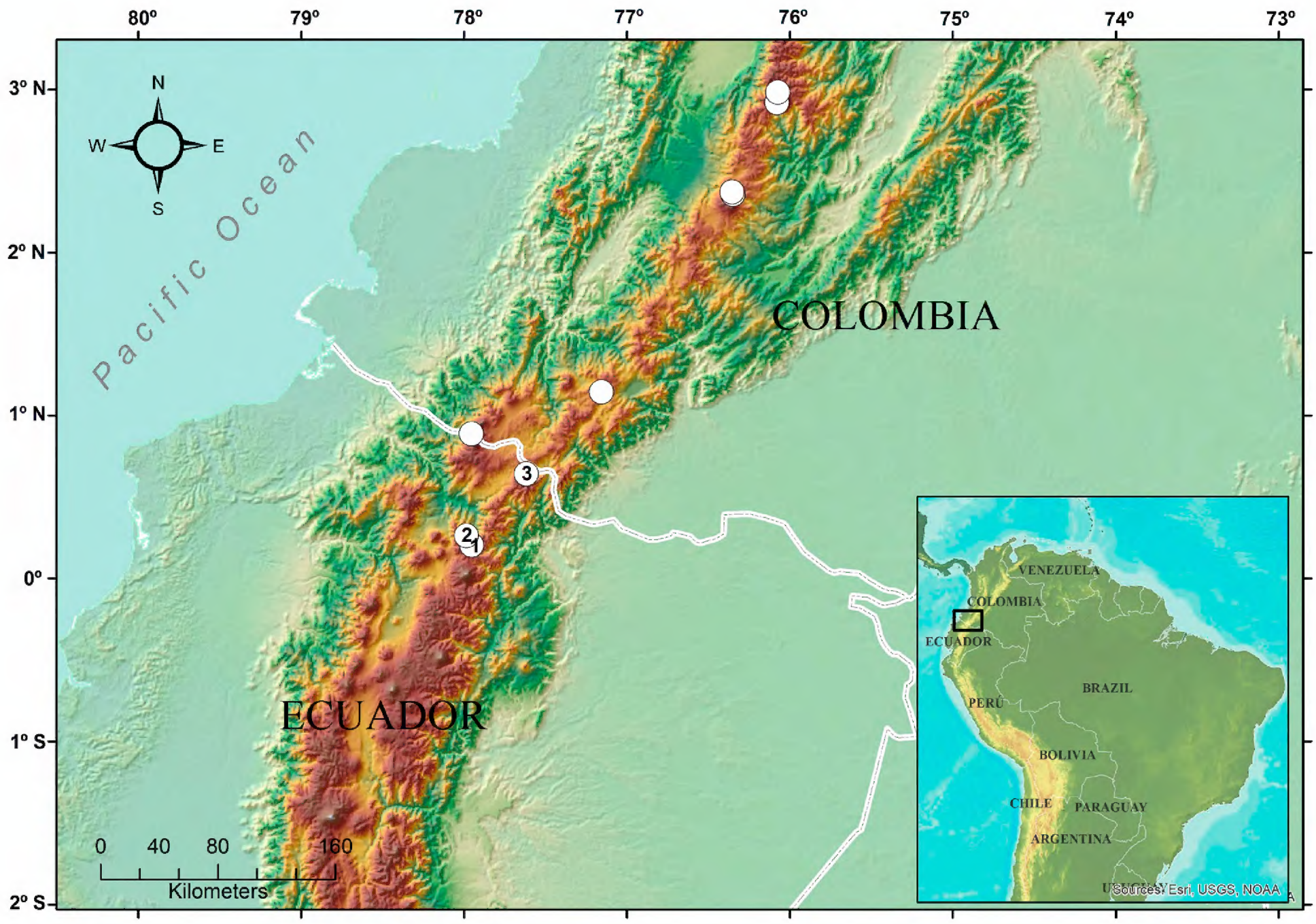

Figure 1. Map showing the distribution previously known of *Pristimantis myersi* in Colombia (white dots), and the new locality records in Ecuador (numbered dots). 1. Laguna de Puruhanta, Province of Imbabura (2,800 m); 2. Nueva América, Province of Imbabura (3,400–3,470 m); 3. El Playón de San Francisco, Province of Sucumbíos (3,350–3,650 m).

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Authors' contribution statement: FJMRR and JMG identified the specimens, FJMRR wrote the text, and JMG revised the text.

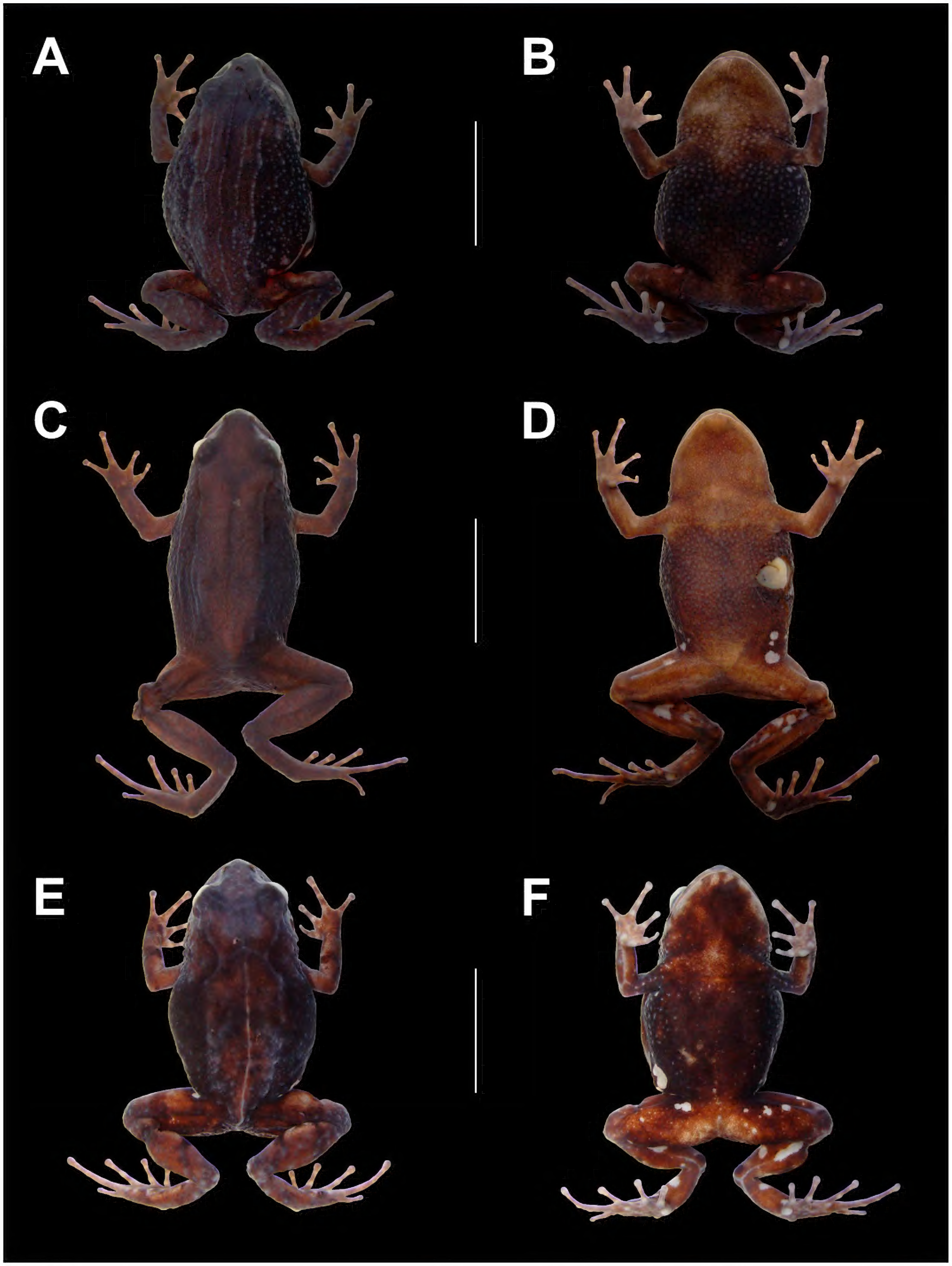

Figure 2. Dorsal (left) and ventral (right) views of three specimens of *Prisitmantis myersi* from Ecuador. **A**, **B**: QCAZ 14562 (female; SVL: 21.3 mm) from El Playón de San Francisco, Province of Sucumbíos; **C**, **D**: QCAZ 11677 (female; SVL: 22.9 mm) from Laguna de Puruhanta, Province of Imbabura; **E**, **F**: QCAZ 14557 (female; SVL: 21.8 mm) from Nueva América, Province of Imbabura. Scale bars represent 10 mm.

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APPENDIX 1.
Additional specimens examined.

Pristimantis myersi: COLOMBIA: Department of Nariño: páramo El Tábano (ICN 2503); Municipality of Cumbal, km 16–17 Chiles-San Felipe, northern slope of Volcán Chiles, 3,780–3,800 m a.s.l. (ICN 24337–24340); Department of Valle del Cauca: PNN Nevado del Huila, Cabaña Inderena, 2,820 m a.s.l. (ICN 6484, 6500); Páez, paramo Santo Domingo, km 51–52, Belalcazar to Tacueyo, 3,500 m a.s.l. (ICN 6677); Puracé, km 55 road Popayán-La Plata, PNN Puracé (ICN 25908–25910); Laguna San Rafael, cabaña San Rafael del Inderena, 3,300 m a.s.l. (ICN 33200–33201, 33203–33204).